Institution: **Hamburg University of Applied Sciences**

Specialization: **Technical Computer Science**

Aim of the course: The student is familiar with the architecture and functions of a computer system, the architecture of computer networks and the design and programming of software. The lecture language is German, the project, the thesis and the seminar can be delivered in English.

Project		
The module aims at providing the practical work in a project group. To reach this unit, a student must • be able to become familiar with a special problem • be able to develop an solution • be able to work successful in a project group		
Examination: presentation (only passed or not passed)		
9 ECTS	6 hours/week	1. semester

Seminar		
The module aims at providing the preparation and realization of computer science presentations out of different topics. To reach this unit, a student must • be able to investigate literature and web; • be able to prepare a well structured presentation • be able to deliver a good and understandable presentation		
Examination: presentation (only passed or not passed)		
3 ECTS	2 hours/week	1. semester

Distributed System		
This module introduces to distributed systems. It provides the basic aspects of middleware and distributed systems infrastructure. Particularly the methods and concepts are introduced with examples from technical and general computer science. The lecture contains: • An introduction of distributed systems according to a description of the characteristic qualities; • Inter process communication; • Distributed shared file systems and name services; • Time, coordination and concur; • Security; • (distributed) Transaction and Concurrency; • Replication according to highest availability and fault tolerance in distributed systems; • Case study distributed systems (e.g. CORBA, RT-CORBA, Jini);		
Examination: written		
6 ECTS	4 hours/week	1. semester

Mandatory Elective Module 1		
Students shall achieve detailed knowledge in actual computer science subjects like IT security, Data warehousing, XML, … To reach this unit, a student must • be able to become familiar with a special topic The topics are changing from semester to semester.		
Examination: written, oral or presentation		
6 ECTS	4 hours/week	1. semester

Mandatory Elective Module 2		
Students shall achieve detailed knowledge in actual computer science subjects like IT security, Data warehousing, XML, … To reach this unit, a student must • be able to become familiar with a special topic The topics are changing from semester to semester.		
Examination: written, oral or presentation		
6 ECTS	4 hours/week	1. semester

Mandatory Elective Module 3		
Students shall achieve detailed knowledge in actual computer science subjects like IT security, Data warehousing, XML, … To reach this unit, a student must • be able to become familiar with a special topic The topics are changing from semester to semester.		
Examination: written, oral or presentation		
6 ECTS	4 hours/week	2. semester

Mandatory Elective Module 4		
Students shall achieve detailed knowledge in actual computer science subjects like IT security, Data warehousing, XML, … To reach this unit, a student must • be able to become familiar with a special topic The topics are changing from semester to semester.		
Examination: written, oral or presentation		
6 ECTS	4 hours/week	2. semester

Social Sciences		
The module covers different topics out of European culture, languages, communication and social sciences.		
Examination: written, oral or presentation		
3 ECTS	2 hours/week	2. semester

Final Project / Bachelor Thesis		
The module aims at the analysis and solution of a section computer science problem. The candidate shall show that he or she is able to apply the knowledge to concrete problems. To reach this unit, a student must • deliver a detailed report • be able to explain the problem and his solution • be able to work successful in a project group • be able to present his/her project results within a presentation • it can be done in a company The student receives 12 ECTS for the Bachelor thesis and 3 ECTS for the final presentation.		
15 ECTS	-	2. semester

Range of the marks

15:	excellent
13 - 14:	very good
10 - 12:	good
7 - 9:	satisfactory
5 - 6:	sufficient
0 – 4:	not passed